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10/635,708	08/05/2003	Juan R. Loaiza	OI7011443001	1877

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EXAMINER
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ART UNIT	PAPER NUMBER
2168	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/635,708	LOAIZA ET AL.
	Examiner	Art Unit	
	CHEYNE D. LY	2168	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*24 December 2008*</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>*1-45*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1-34 and 36-44*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>*March 02, 2009*</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   **Office Action Summary**   Part of Paper No./Mail Date 20090328

DETAILED ACTION

1. Applicants' arguments filed December 24, 2008 have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

2. The information disclosure statement (IDS) submitted on March 02, 2009 was filed after the mailing date of the Non-Final Office Action on September 24, 2008. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

3. Claims 15-45 are examined on the merits.

OBJECTIONS

4. Claim 45 IS objected to because the recitation of "The system of claim 15" while claim 15 is directed to a method.

REMARKS

5. On pages 7-9, Applicant argues Downing does not disclose at least of the limitations of "database recover logs" and "a view of the at least one of said database recovery logs" of claims 15, 26, and 36.

6. It is noted that Downing does not explicitly describe that "the at least one of the database recovery logs contains information for restoring that database to a specific state." However, Lindsay has been cited to describe "the at least one of the database recovery logs contains information for restoring that database to a specific state" (page 54, column 1, last paragraph,

e.g. the recovery log is used to buffer the information need for snapshot refresh, column 2,

e.g. the recovery log can support snapshot refresh "as of" a given time). Therefore, it would

have been obvious to one of ordinary skill in the art to use the method of Downing with the

use of recovery logs to support the snapshot refresh as described by Lindsay.

7.   As for the limitation of "a view of the at least one of said database recovery logs",

Applicant argues the cited "query 4a" is against the order log rather than a view of the

recovery log. It is noted that Applicant describes a database view of a recovery log (log file)

essentially provides a virtual database table that is constructed using data retrieved from one

or more recovery logs (page 7, lines 12-13). Examiner concurs that "query 4a" is directed to

the log the order log. However, the asserted order log as pointed to by Applicant is actually

the "view" of the log file. For example, Downing discloses master logs record the primary

key values, the filter values, and information about the modification for each row that is

inserted, deleted, or modified in a corresponding master table. Master logs can be

implemented as a buffer in main memory, or preferably in a persistent storage such as a file

on a hard disk. In some implementations, master logs can be the same as a transaction log,

but in other implementations, master logs are stored in a separate file (column 6, lines 55-63).

Therefore, the cited order log has been interpreted as "establishing a view of the at least one

of said database recovery logs, and "query 4a" as the claimed issuing a database statement to

query said view.

8.   As for the argued limitation of "database recovery logs", Downing discloses

ORDER_LINE LOG and ORDER LOG (Figures 4(a)-(c) and 5(a)-(c).

9. As for the argued limitation of "insulating said view from a format of the at least one of

said database recovery logs", Downing discloses master logs record the primary key values,

the filter values, and information about the modification for each row that is inserted, deleted,

or modified in a corresponding master table. Master logs can be implemented as a buffer in

main memory, or preferably in a persistent storage such as a file on a hard disk. In some

implementations, master logs can be the same as a transaction log, but in other

implementations, master logs are stored in a separate file (column 6, lines 55-63). The cited

"query 4a" is directed to the relational tables illustrated in Figure 5(a)-(c) which has been

interpreted as insulating said view from the file format of the log files (column 6, lines 55-

63).

CLAIM REJECTIONS - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent

any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to

point out the inventor and invention dates of each claim that was not commonly owned at the

time a later invention was made in order for the examiner to consider the applicability of 35

U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 15-24, 26-34, and 36-44 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Downing et al. (US 6,289,335B1) (Downing hereafter) taken with Lindsay

et al. (1986) (Lindsay hereafter).

MOTIVATION TO COMBINE

13. Downing describes there is a need for a database system that can perform a fast refresh of

snapshots defined by queries (column 3, lines 42-48). Lindsay describes a method for

providing efficient support for remote snapshots by allowing each snapshot to extract only

needed data from the base table (page 54, column 1, lines 1-16). Therefore, one of ordinary

skill in the art at the time of the invention would have been motivated by Lindsay to address

the need described by Downing by providing efficient support for remote snapshots by

allowing each snapshot to extract only needed data from the base table.

BASIS FOR PRIOR ART

14. In regard to claim 15, Downing discloses a method of accessing database recovery logs,

said method comprising:

selecting one or more of said database recovery logs to access (column 7, line 13, e.g. "order

line log");

establishing a view of said one or more database recovery logs (Figures 5(a)-(c));

      insulating said view from a format of said one or more database recovery logs

      (Figures 5(a)-(c));

issuing a database statement to query said view (column 12, lines 15-38, e.g. QUERY

4a);

retrieving data from said one or more database recovery logs in response to said

database statement (column 12, lines 15-38, e.g. QUERY 4a); and

displaying a result of the act of retrieving the data or storing the result in an tangible

computer readable medium (column 5, line 20, and Figure 1, e.g. display).

15. Downing describes a snapshot can be refreshed on a periodic basis to reflect the current

state of its corresponding base tables (column 1, lines 15-17). However, Downing does not

explicitly describe that "the at least one of the database recovery logs contains information

for restoring that database to a specific state."

16. Lindsay describes "the at least one of the database recovery logs contains information for

restoring that database to a specific state" (page 54, column 1, last paragraph, e.g. the

recovery log is used to buffer the information need for snapshot refresh, column 2, e.g. the

recovery log can support snapshot refresh "as of" a given time).

17. Therefore, it would have been obvious to one of ordinary skill in the art to use the method

of Downing with the use of recovery logs to support the snapshot refresh as described by

Lindsay.

18. In regard to claim 16, Downing discloses insulating said view comprises:

Generating a data dictionary snapshot (column 5, line 42, e.g. a snapshot definition

query has been interpreted as data dictionary); and

Translating said data using said data dictionary snapshot (column 2, lines 1-9, e.g.

Since a snapshot also stores administrative information, the database system presents

to Smith a snapshot view, which hides the administrative information).

19. In regard to claim 17, Downing discloses data is translated into an external data format

(column 2, lines 1-9, e.g. a snapshot view, which hides the administrative information which

represents an external format).

20. In regard to claim 18, Downing discloses time and/or date boundaries are established for

said recovery logs (column 12, lines 15-38, e.g. QUERY 4a, especially, "TIME$$")

21. In regard to claim 19, Downing discloses wherein said database statement is a SQL

statement (column 12, lines 15-38, e.g. QUERY 4a).

22. In regard to claim 20, Downing discloses said recovery logs comprise an a redo log

(column 3, lines 55-60, e.g. "refresh").

23. In regard to claims 21 and 23, Downing discloses said view is a relational view

comprising at least one row and at least one column (Figures 5(a)-(c)). The inclusion of

Alexander et al. is not being used as prior art, but only to support that it is well know in the

art that a "view is a relational table that does not exist in physical storage but is derived from

one or more base tables (Alexnder et al., column 2, lines 41-44).

24. In regard to claim 22, Downing discloses said view is formed from a plurality of said

recovery logs (Figure 9(a) and (b), e.g. "process master logs").

25. In regard to claim 24, Downing discloses a virtual table using data from the at least one

of said one or more database recovery logs, wherein a format of said virtual table (Figures

4(a) to (c), e.g. ORDER_LINE LOG) is independent of the format of the at least said one or

more database recovery logs (column 6, lines 55-63, e.g. file format).

26. In regard to claims 26-34 and 36-44, Downing discloses the computer program and

system (column 4, line 65, to column 5, line 39, and Figure 1) for the above cited method.

CONCLUSON

27. Claims 25, 35, and 45 objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims. The limitation of "a format of the view remains

unchanged without modifying a query statement corresponding to the view when the format

of the at least one of said recovery logs changes" as supported by the specification (page 9,

lines 21-22) is free of any prior art.

28. **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

29. A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until

after the end of the THREE-MONTH shortened statutory period, then the shortened statutory

period will expire on the date the advisory action is mailed, and any extension fee pursuant to

37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

30. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

31. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199. The USPTO's official fax number is 571-272-8300.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo, can be reached on (571)272-3642.

/Cheyne D Ly/
Primary Examiner, Art Unit 2168